

Mumbai University

Question Paper

**[CBSGS – 75:25 PATTERN]
(OCTOBER – 2015)**

PAPER - I

**INTERNET
TECHNOLOGIES**

Time: 2 ½ Hours**Total Marks:** 75**N.B.:** (1) All Question are Compulsory.

(2) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(3) Answer To The Same Question Must Be Written Together.

(4) Number To The Right Indicates Marks.

(5) Draw Neat Labeled Diagrams Wherever Necessary.

(6) Use of Non – Programmable Calculator is allowed.

Q.1 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) How can the class of an IP Address in classful addressing be identified? Explain. (5)
- (B) Explain fields related to Fragmentation in IP. (5)
- (C) Explain Network Layer and Application Layer of ISO – OSI Model. (5)
- (D) Explain transition strategies from IPv4 to IPv6. (5)

Q.2 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Draw and explain Packet Format of ATMARP. (5)
- (B) Explain Agent Discovery Phase of Mobile Communication. (5)
- (C) Explain two node instability in RIP and its solutions. (5)
- (D) Explain Hello Message Packet Format of OSPF. (5)

Q.3 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Explain features of User Datagram Protocol. (5)
- (B) Explain Half Close in TCP Connection Termination. (5)
- (C) What is Silly Window Syndrome? Explain the Silly Window Syndrome created by the receiver. (5)
- (D) What are the different timers in TCP? Explain each in detail. (5)

Q.4 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Explain following terms with reference to SCTP: (5)
- (i) Transmission Sequence Number
- (ii) Stream Identifier
- (iii) Stream Sequence Number
- (B) Explain Data Chunk in detail. (5)
- (C) Draw and explain the DHCP Client Transition Diagram. (5)
- (D) Explain in detail Recursive and Iterative Resolution in DNS. (5)

Q.5 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Explain modes of operations in TELNET. (5)
- (B) What are the components of SSH? Explain. (5)
- (C) Explain the two FTP Connections. (5)
- (D) Explain Static, Dynamic and Active Documents. (5)

Q.6 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Explain the following email scenarios with the help of diagrams: (5)
- (i) When the sender and the receiver of an e-mail are on different mail servers.
- (ii) When sender is connected to the mail server via LAN or a WAN.
- (B) Write short notes on POP3 and IMAP4. (5)
- (C) Explain MPEG Video Compression. (5)
- (D) Explain Token Bucket Technique to Shape Traffic. (5)

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Q.7 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Explain the concept of Network Address Translation. (5)
 - (B) Explain Notification Message Format of BGP. Also explain various Error Codes and Error Subcodes. (5)
 - (C) Explain Byte Number, Sequence Number, Acknowledgement number with example. (5)
 - (D) With the help of a diagram, explain the Header Format of DNS Message in detail. (5)
 - (E) What are HTTP Persistent and Nonpersistent Connections? Explain. (5)
 - (F) Discuss the flow characteristics when dealing with multimedia. (5)
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